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1969



STATE DOCUMENTS

JAN 19 1971

ANALYSIS OF CONTRACTS AWARDED
CALENDAR YEAR 1969

PREPARED BY THE
MONTANA STATE HIGHWAY COMMISSION, STATE
PLANNING SURVEY SECTION

IN COOPERATION WITH THE
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

CONTRACT ANALYSES
Calendar Year 1969

FOREWARD

The attached tabulations have been prepared from the Detailed Estimate and Contract Award sheet for all contracts awarded during the calendar year 1969. A brief explanation of each of the following tables is provided to help in the interpretation of the figures and to lessen the possibility of erroneous conclusions.

Table 1 - Summary of New and Reconstructed Roadway Only, by County and Financial District.

This table is intended to inform the user of how many actual miles of roadway were let to contract and the costs involved. It includes all items pertinent to the same section of roadway except structures.

Table 1A - Summary of Total Amounts Awarded by County and Financial District.

This table is a total of all miles and costs involved regardless of the type of project. Besides roadway costs, it includes signing, lighting, fencing and bridge projects.

Table 2 - Summary of Roadway Mileage Awarded by Systems.

The table involves the same type of construction as Table 1. Table 2, however, provides a cost per mile figure for the different systems and also provides a simple analysis of benefits by inclusion of the "cost per annual vehicle mile."

Table 3-3a-3c - Summary of Type of Construction.

A separate table has been prepared for each Federal Aid System with all projects including signing and Fencing classified into 10 different categories. The purpose of this table is to give a general indication of what type of construction is responsible for the major share of monies spent. For example, note the bulk of Interstate monies is spent for New Construction, whereas, the greater share for Primary and Secondary is spent for Reconstruction.

Table 4-4a-4c - Summary by Surface Type by Systems.

These tables indicate the average cost per mile of various items included in a completed roadway by type of surfacing. Caution should be exercised in using the average cost per mile data due to the small sample involved for some cost items.

Table 5 - Summary of Roadway Mileage Awarded by Number of Traffic Lanes.

This table deals with the same miles and costs involved in Tables 1 and 2.

Table 6-6a-6c-6d - Summary of Structures by Type.

These tables summarize the number of structures let by type and also provide a cost per square foot, by type of structure.

Table 7-7a-7c - Summary of Roadway Mileage Awarded by ADT.

The table involves only actual roadway constructed, as Tables 1, 2 and 5 and provides a relationship between the volumes of traffic, miles constructed and costs. It is possible to further develop this table to obtain a road user benefit on a vehicle mile basis.

Table 8 - Summary of Contracted and Non-contracted Costs by System.

Some items, such as railroad flagging, roadway materials, detours and traffic control devices are considered non-contract items in certain instances. The costs of such items are included in the Detailed Estimate, but not in the Contract Award Amount. This table tabulates the two costs for the users information.

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SUBVY SECTION

SUMMARY OF ROADWAY MILEAGE ADDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1976

THIS TABLE SUMMARIZES ONLY AND IS ACCOUNTED BY ROADWAY. REFER TO TABLE FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED
DECEMBER 31, 1970

TABLE 1

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM MILES	INTERSTATE SYSTEM COST	PRIMARY SYSTEM MILES	PRIMARY SYSTEM COST	SECONDARY SYSTEM MILES	SECONDARY SYSTEM COST	OTHER SYSTEMS MILES	OTHER SYSTEMS COST	ALL SYSTEMS MILES	ALL SYSTEMS COST
FLATHEAD	---	---	2,400	1,700,000	2,400	1,700,000	---	---	2,400	1,700,000
LAKE	---	---	2,138	1,413,706	2,138	1,413,706	---	---	2,138	1,413,706
LINCOLN	---	---	2,325	1,852,600	2,325	1,852,600	---	---	2,325	1,852,600
FD #01	---	---	11,534	3,186,309	11,534	3,186,309	---	---	11,534	3,186,309
HILL	---	---	3,419	174,306	3,419	174,306	---	---	3,419	174,306
TONLE	---	---	---	---	---	---	---	---	---	---
FD #02	---	---	1,310	174,306	1,310	174,306	---	---	1,310	174,306
PHILLIPS	---	---	7,641	1,102,061	7,641	1,102,061	---	---	7,641	1,102,061
ROOSEVELT	---	---	---	---	---	---	---	---	---	---
VALLEY	---	---	7,641	1,102,061	7,641	1,102,061	---	---	7,641	1,102,061
FD #03	---	---	---	---	---	---	---	---	---	---
CUSTER	---	---	7,734	1,628,572	7,734	1,628,572	---	---	7,734	1,628,572
FD #04	---	---	---	---	---	---	---	---	---	---
FERGUS	---	---	---	---	---	---	---	---	---	---
FD #05	---	---	---	---	---	---	---	---	---	---
CASCADE	12,739	3,676,698	2,022	1,929,603	2,022	1,929,603	---	---	14,761	5,606,301
CHUTEAU	---	---	1,223	200,719	1,223	200,719	---	---	1,223	200,719
JUDITH BASIN	---	---	---	---	---	---	---	---	---	---
TETON	---	---	---	---	---	---	---	---	---	---
FD #06	12,739	3,676,698	4,215	2,000,222	4,215	2,000,222	---	---	16,954	5,676,920
JEFFERSON	5,337	1,917,021	---	---	---	---	---	---	5,337	1,917,021
LEWIS & CLARK	---	---	---	---	---	---	---	---	---	---
FD #07	5,337	1,917,021	---	---	---	---	---	---	5,337	1,917,021
GRANITE	3,131	1,263,426	---	---	---	---	---	---	3,131	1,263,426
MISSOULA	22,398	11,559,782	---	---	---	---	---	---	22,398	11,559,782
POWELL	---	---	---	---	---	---	---	---	---	---
SANDERS	---	---	---	---	---	---	---	---	---	---
FD #09	25,529	12,823,208	4,731	1,210,077	4,731	1,210,077	---	---	30,260	14,033,285

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY COUNTY AND FINANCIAL DISTRICT
FISCAL CALENDAR YEAR 1969

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAY. REFER TO TABLE 1A FOR THE TOTAL AMOUNTS OF CONTRACTS AWARDED
DECEMBER 31, 1970

TABLE 1

COUNTY AND FINANCIAL DISTRICT	INTERSTATE MILES	INTERSTATE SYSTEM COST	PRIMARY SYSTEM MILES	PRIMARY SYSTEM COST	SECONDARY SYSTEM MILES	SECONDARY SYSTEM COST	OTHER SYSTEMS MILES	OTHER SYSTEMS COST	ALL SYSTEMS MILES	ALL SYSTEMS COST
BEAVERHEAD	15.173	4,891,946	1.298	921,766	3.504	576,647	---	---	18.781	5,468,793
SILVER BOW	15.173	4,891,946	1.298	921,766	3.504	576,647	---	---	18.781	5,468,793
FD #09	---	---	---	---	---	---	---	---	---	---
GALLATIN	---	---	5.937	269,566	---	---	---	---	5.937	269,566
WHEATLAND	---	---	5.982	1,038,977	---	---	---	---	5.982	1,038,977
FD #10	---	---	6.569	1,307,563	---	---	---	---	6.569	1,307,563
CARRON	---	---	---	---	4.427	75,123	---	---	4.427	75,123
STILLWATER	---	---	---	---	7.452	601,911	---	---	7.452	601,911
YELLOWSTONE	---	---	6.223	469,561	7.389	677,036	---	---	13.612	1,146,597
FD #11	---	---	---	---	---	---	---	---	---	---
CASCADE	17.012	4,962,816	---	---	0.086	651,445	---	---	17.098	5,614,261
ROSEBUD	17.012	4,962,816	---	---	0.086	651,445	---	---	17.098	5,614,261
FD #12	---	---	---	---	---	---	---	---	---	---
TOTAL	95.272	30,326,875	45.654	12,333,614	76.433	6,448,276	---	---	205.059	49,134,765

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TOTAL AMOUNTS AWARDED
BY COUNTY AND FINANCIAL DISTRICT
OPENING CALENDAR YEAR 1966
TABLE 1A

DECEMBER 31, 1970

COUNTY AND FINANCIAL DISTRICT	INTERSTATE SYSTEM MILES	INTERSTATE SYSTEM COST	PRIMARY SYSTEM MILES	PRIMARY SYSTEM COST	SECONDARY SYSTEM MILES	SECONDARY SYSTEM COST	OTHER SYSTEMS MILES	OTHER SYSTEMS COST	ALL SYSTEMS MILES	ALL SYSTEMS COST
FINANCIAL DISTRICT										
FLATHEAD										
LAKE			14,394	1,416,472	3,660	196,000			18,054	1,612,472
LINCOLN			4,251	2,282,123	21,500	11,243			25,951	2,293,366
FD #01			18,697	3,673,438	56,760	130,458			75,457	3,803,896
GLACIER			6,973	62,476	000	71,000			6,973	133,476
HILL			1,332	222,680	6,217	391,563			7,549	614,243
TOOLE			9,505	295,065	6,247	4,3363			15,752	300,403
FD #02									21,668	3,266,966
DANIELS					18,600	6,403			18,600	6,403
PHILLIPS					10,322	7,7252			10,322	7,7252
ROOSEVELT			7,562	1,279,248	90,600	17,225			17,225	1,279,248
SHERIDAN					14,362	330,302			14,362	330,302
VALLEY					51,372	25,4246			51,372	25,4246
FD #03			7,662	1,279,048	305,466	1,046,614			112,728	3,176,566
CUSTER			10,334	1,301,705					10,334	1,301,705
DAWSON			40,300	77,040					40,300	77,040
PRAIRIE			30,810	3,798,360					30,810	3,798,360
FD #04									122,453	5,677,114
FERGUS			12,300	2,251	4,580	517,265			20,880	541,536
FD #05			16,300	4,251	4,580	637,265			20,880	541,536
CASCADE			21,000	9,955,644	3,092	1,403,119			24,092	11,358,763
CHOUTEAU			1,223	200,719	56,900	22,000			98,123	222,719
JUDITH BASIN			52,500	18,403	5,310	243,247			57,810	302,150
PONDERA			308	33,003					308	33,003
TETON					5,031	529,072			5,031	529,072
FD #06			21,000	9,955,644	57,123	2,161,644			78,123	12,117,288
BROADWATER			2,553	592,614					2,553	592,614
JEFFERSON			28,720	5,833,495	4,323	7,340			33,043	5,840,835
LEWIS & CLARK			5,419	3,291,729	4,345	294,764			9,764	3,586,493
FD #07			30,692	9,717,830	6,132	12,185			36,824	10,588,295
GRANITE			3,131	1,274,302					3,131	1,274,302
MINEAUL				9,454						9,454

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TOTAL AMOUNTS AWARDED
BY COUNTY AND FINANCIAL DISTRICT
DURING CALENDAR YEAR 1960
TABLE 17

DECEMBER 31, 1970

COUNTY AND FINANCIAL DISTRICT	INTERSTATE MILES	INTERSTATE SYSTEM COST	STATEWAY MILES	STATEWAY SYSTEM COST	OTHER MILES	SYSTEMS COST	ALL SYSTEMS MILES	ALL SYSTEMS COST
MISSOULA	22.610	12,405,199	107.661	51,096			22.618	12,712,840
POWELL		16,315		32,955			2,966	53,300
SANDFOS				32,222			36,537	1,223,384
FD #08	25.745	13,495,270	40.537	35,166			101.452	15,831,788
BEAVERHEAD	15.264	5,466,999	3.613	3,203			18.863	5,099,382
DEER LODGE							17.600	8,371
SILVER GOW	5.926	36,304					7.393	1,031,040
FD #09	21.340	5,503,303	15.303	1,054,736			43.862	7,198,793
GALLATIN	13.950	4,056,922					14.537	4,347,119
MEAGHER							57.720	286,465
PARK		8,600						8,690
WHEATLAND							34.554	1,423,082
FD #10	13.550	4,065,853	87.991	4,378			106.519	5,070,356
BIG HORN	5.346	1,796,272					5.946	1,831,872
CARRON								259,203
MUSSELSHILL							4.86	7,824
STILLWATER	23.526	5,125,058					36.078	5,726,969
TREASURE							825	9,586
YELLOWSTONE	16.481	57,046					17.104	506,707
FD #11	31.053	6,978,376	6.523	1,7587			68.263	8,572,884
CARTER							9.085	651,445
ROSEBUD	17.927	6,105,153					17.597	6,105,153
FD #12	17.927	6,105,153					26.182	6,756,598
TOTAL	226.916	62,558,047	351.398	14,059,928	452.592	7,407,604	921.506	84,425,479

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY SYSTEMS
DURING CALENDAR YEARS 1969

THIS TABLE SUMMARIZES ONLY NEW OR RECONSTRUCTED ROADWAYS
TABLE 2

DECEMBER 31, 1970

SYSTEM	MILEAGE	TOTAL COST	COST PER MILE	ANNUAL VEHICLE MILES	COST PER ANNUAL VEHICLE MILE
RURAL					
INTERSTATE RURAL	84.797	30,277,984	357,064	52,350,490	60.578
PRIMARY RURAL	39.563	8,725,524	219,863	19,177,320	60.454
SECONDARY RURAL	72.064	6,362,267	85,018	3,161,265	62.012
OTHER					60.000
SUBTOTAL RURAL	196.429	45,365,775	229,524	74,689,585	60.607
MUNICIPAL					
INTERSTATE MUNICIPAL	.275	48,891	177,795	97,235	60.560
PRIMARY MUNICIPAL	5.386	3,614,090	614,014	15,338,400	60.234
SECONDARY MUNICIPAL	.469	106,099	226,031	148,920	60.711
OTHER					60.000
SUBTOTAL MUNICIPAL	6.130	3,768,090	568,475	15,624,555	60.241
TOTAL BY SYSTEM					
INTERSTATE	85.072	30,326,875	355,484	52,437,725	60.578
PRIMARY	45.554	12,339,614	270,878	34,556,230	60.356
SECONDARY	74.433	6,468,276	85,300	3,310,185	61.954
OTHER					60.000
GRAND TOTAL	205.059	49,134,765	239,612	97,314,140	60.544

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1969
BY SYSTEM

TABLE 3

DECEMBER 31, 1970

TYPE OF CONSTRUCTION	<u>INTERSTATE</u>	
	MILES	COST
RURAL		
NEW CONSTRUCTION	78.650	28,936,474
RECONSTRUCTION		
ADD TWO LANES	6.147	1,341,510
MAJOR STRUCTURES		12,915,838
RESURFACE		
STAGE CONSTRUCTION	71.168	16,899,875
TRAFFIC CONTROL, SEEDING & FENCING	62.059	304,772
REST AREA, WEIGH STN & SENIC OVERLOOK		534,987
WIDENING ROADWAY		
OTHER	4.684	157,278
TOTAL		61,090,734
MUNICIPAL		
NEW CONSTRUCTION	.275	48,891
RECONSTRUCTION		
ADD TWO LANES		
MAJOR STRUCTURES		898,510
RESURFACE		
STAGE CONSTRUCTION	1.912	495,585
TRAFFIC CONTROL, SEEDING & FENCING	.831	24,327
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		1,467,313
ALL CONSTRUCTION		
NEW CONSTRUCTION	78.925	28,985,365
RECONSTRUCTION		
ADD TWO LANES	6.147	1,341,510
MAJOR STRUCTURES		13,814,348
RESURFACE		
STAGE CONSTRUCTION	73.080	17,395,460
TRAFFIC CONTROL, SEEDING & FENCING	62.890	329,099
REST AREA, WEIGH STN & SENIC OVERLOOK		534,987
WIDENING ROADWAY		
OTHER	4.684	157,278
TOTAL		62,558,047

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1969
BY SYSTEM

TABLE 3A

DECEMBER 31, 1970

TYPE OF CONSTRUCTION	PRIMARY 1	
	MILES	COST
RURAL		
NEW CONSTRUCTION		
RECONSTRUCTION	39.668	8,725,524
ADD TWO LANES		
MAJOR STRUCTURES		508,338
RESURFACE	9.428	267,256
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	291.792	191,078
REST AREA, WEIGH STN & SENIC OVERLOOK		51,700
WIDENING ROADWAY	.333	67,924
OTHER		169,440
TOTAL		9,981,260
MUNICIPAL		
NEW CONSTRUCTION	.587	268,566
RECONSTRUCTION	5.299	3,345,524
ADD TWO LANES		
MAJOR STRUCTURES		157,221
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	4.760	213,583
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		93,774
TOTAL		4,078,668
ALL CONSTRUCTION		
NEW CONSTRUCTION	.587	268,566
RECONSTRUCTION	44.967	12,071,048
ADD TWO LANES		
MAJOR STRUCTURES		665,559
RESURFACE	9.428	267,256
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	296.552	404,661
REST AREA, WEIGH STN & SENIC OVERLOOK		51,700
WIDENING ROADWAY	.333	67,924
OTHER		263,214
TOTAL		14,059,928

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF TYPE OF CONSTRUCTION
DURING CALENDAR YEAR 1969
BY SYSTEM

TABLE 3C

DECEMBER 31, 1970

TYPE OF CONSTRUCTION	<u>SECONDARY</u>	
	MILES	COST
RURAL		
NEW CONSTRUCTION	2.966	516,985
RECONSTRUCTION	70.998	5,845,282
ADD TWO LANES		
MAJOR STRUCTURES		416,607
RESURFACE	4.878	110,363
STAGE CONSTRUCTION	22.186	568,849
TRAFFIC CONTROL, SEEDING & FENCING	349.620	114,933
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.855	127,092
TOTAL		7,700,111
MUNICIPAL		
NEW CONSTRUCTION		
RECONSTRUCTION	.469	106,009
ADD TWO LANES		
MAJOR STRUCTURES		
RESURFACE		
STAGE CONSTRUCTION		
TRAFFIC CONTROL, SEEDING & FENCING	.500	1,384
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER		
TOTAL		107,393
ALL CONSTRUCTION		
NEW CONSTRUCTION	2.966	516,985
RECONSTRUCTION	71.467	5,951,291
ADD TWO LANES		
MAJOR STRUCTURES		416,607
RESURFACE	4.878	110,363
STAGE CONSTRUCTION	22.186	568,849
TRAFFIC CONTROL, SEEDING & FENCING	350.120	116,317
REST AREA, WEIGH STN & SENIC OVERLOOK		
WIDENING ROADWAY		
OTHER	.855	127,092
TOTAL		7,807,504

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1969
INTERSTATE SYSTEM

TABLE 4

DECEMBER 31, 1970

COST ITEM		SURFACE TYPE			ALL	MISC.
		STAGE CONST.	BITUM. MIX	CONCRETE	CONST.	ITEMS
GRADING	MILES	20.559	112.502	17.495	150.556	
	COST	3,400,101	9,326,625	1,109,785	13,836,511	
	COST/MILE	165,382	82,901	63,434	91,902	
DRAINAGE	MILES	20.559	97.625	17.495	135.679	4.502
	COST	1,279,038	2,238,669	359,634	3,877,341	7,439
	COST/MILE	62,213	22,931	20,556	28,577	1,652
FOUNDATION	MILES	19.422	120.280	17.495	157.197	
	COST	334,069	7,977,574	1,536,483	9,848,126	
	COST/MILE	17,200	66,325	87,824	62,648	
SURFACING	MILES	18.910	120.280	17.495	156.685	
	COST	126,852	8,818,809	2,778,091	11,723,752	
	COST/MILE	6,708	73,318	158,793	74,823	
RDSIDE DEVEL.	MILES	1.137	74.229	10.170	85.536	7.912
	COST	14,586	181,921	1,821	198,328	488,184
	COST/MILE	12,828	2,450	179	2,318	61,701
EROSION CTL.	MILES	20.559	116.327	17.495	154.381	46.085
	COST	341,518	742,725	125,336	1,209,579	143,365
	COST/MILE	16,611	6,384	7,164	7,835	3,110
TRAFFIC CTL.	MILES	20.047	120.280	17.495	157.822	46.085
	COST	8,500	1,728,484	268,552	2,005,536	17,700
	COST/MILE	424	14,370	15,350	12,707	384
FENCING	MILES	19.276	70.466	17.495	107.237	21.307
	COST	3,780	568,917	124,256	696,953	159,002
	COST/MILE	196	8,073	7,102	6,499	7,462
MISC.	MILES	3.475	29.147	10.170	42.792	4.502
	COST	35,985	810	6,290	43,085	57,611
	COST/MILE	10,355	27	618	1,006	12,796
BRIDGES	SQ. FEET					689,500
	COST					12,558,514
	COST/SQ. FOOT					18.213
ALL ITEMS	MILES	20.559	120.280	17.495	158.334	68.582
	COST	5,544,429	31,584,534	6,310,248	43,439,211	13,431,815
	COST/MILE	269,683	262,591	360,688	274,351	195,850

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1969
PRIMARY SYSTEM

DECEMBER 31, 1970

TABLE 4A

COST ITEM		GRAVEL	SURFACE TYPE BITUM. MIX	CONCRETE	ALL CONST.	MISC. ITEMS
GRADING	MILES		54.973	.177	55.150	.165
	COST		2,660,344	9,694	2,670,038	65,947
	COST/MILE		48,393	54,768	48,414	399,678
DRAINAGE	MILES		54.973	.177	55.150	.165
	COST		1,923,112	124,003	2,047,115	123,573
	COST/MILE		34,982	700,581	37,119	748,927
FOUNDATION	MILES		54.973	.177	55.150	.165
	COST		2,683,432	28,120	2,711,552	4,930
	COST/MILE		48,813	158,870	49,166	29,878
SURFACING	MILES		54.973	.177	55.150	.165
	COST		2,427,519	80,267	2,507,786	53,186
	COST/MILE		44,158	453,485	45,472	322,339
RDSIDE DEVEL.	MILES		8.400	.177	8.577	
	COST		180,948	6,136	187,084	
	COST/MILE		21,541	34,666	21,812	
EROSION CTL.	MILES		40.464		40.464	
	COST		149,640	200	149,840	9,484
	COST/MILE		3,698		3,703	
TRAFFIC CTL.	MILES		54.973	.177	55.150	279.138
	COST		1,130,108	23,889	1,153,997	339,783
	COST/MILE		20,557	134,966	20,924	1,217
FENCING	MILES		.854		.854	17.579
	COST		4,918		4,918	31,391
	COST/MILE		5,758		5,758	1,785
MISC.	MILES		4.995	.177	5.172	
	COST		29,300	39,350	68,650	48,600
	COST/MILE		5,865	222,316	13,273	
BRIDGES	SQ. FEET					32,992
	COST					605,057
	COST/SQ. FOOT					18.339
ALL ITEMS	MILES		54.973	.177	55.150	296.848
	COST		11,189,321	311,659	11,500,980	1,281,951
	COST/MILE		203,542	1,760,785	208,539	4,318

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY BY SURFACE TYPE
DURING CALENDAR YEAR 1969
SECONDARY SYSTEM

TABLE 4C

DECEMBER 31, 1970

COST ITEM		SURFACE TYPE			ALL	MISC.
		GRAVEL	BITUM. MIX	CONCRETE	CONST.	ITEMS
GRADING	MILES	14.362	87.135		101.497	
	COST	169,263	2,034,096		2,203,359	
	COST/MILE	11,785	23,344		21,708	
DRAINAGE	MILES	14.362	87.135		101.497	
	COST	50,008	767,783		817,791	27,864
	COST/MILE	3,481	8,811		8,057	
FOUNDATION	MILES	14.362	87.135		101.497	
	COST	70,802	1,187,347		1,258,149	2,100
	COST/MILE	4,929	13,626		12,395	
SURFACING	MILES	14.362	87.135		101.497	
	COST	1,257	1,868,082		1,869,339	
	COST/MILE	87	21,438		18,417	
ROADSIDE DEVEL.	MILES		9.272		9.272	
	COST		13,526		13,526	
	COST/MILE		1,458		1,458	
EROSION CTL.	MILES	8.519	77.002		85.521	.825
	COST	1,185	84,460		85,645	9,615
	COST/MILE	139	1,096		1,001	11,654
TRAFFIC CTL.	MILES	14.362	87.135		101.497	346.200
	COST	7,763	235,161		242,924	108,819
	COST/MILE	540	2,698		2,393	314
FENCING	MILES		4.345		4.345	3.920
	COST		6,000		6,000	7,986
	COST/MILE		1,380		1,380	2,037
MISC.	MILES		2.966		2.966	.030
	COST		1,000		1,000	64,900
	COST/MILE		337		337	2,163,333
BRIDGES	SQ. FEET					20,721
	COST					378,735
	COST/SQ. FOOT					18.277
ALL ITEMS	MILES	14.362	87.135		101.497	351.095
	COST	300,278	6,197,455		6,497,733	600,019
	COST/MILE	20,907	71,124		64,018	1,708

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED BY NUMBER OF TRAFFIC LANES
DURING CALENDAR YEAR 1969

TABLE 5

DECEMBER 31, 1970

NO. LANES	MILES	COST	COST/MILE
INTERSTATE SYSTEM			
2	.733	83,436	113,828
4	84.339	30,243,439	358,593
TOTAL	85.072	30,326,875	356,484
PRIMARY SYSTEM			
2	36.978	7,457,623	201,677
4	8.576	4,881,991	569,262
TOTAL	45.554	12,339,614	270,878
SECONDARY SYSTEM			
2	74.433	6,468,276	86,900
4			
TOTAL	74.433	6,468,276	86,900
ALL SYSTEMS			
2	112.144	14,009,335	124,922
4	92.915	35,125,430	378,038
TOTAL	205.059	49,134,765	239,612

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1969
INTERSTATE SYSTEM

TABLE 6

DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOO
TIMB. GIRD.	X001	1	588	2,353	4.001
CONC. SLAB	X220	5	31,902	392,193	12.293
CONC. GIRD	X221	1	4,940	62,257	12.602
STEEL GIRD.	X031	2	89,658	1,853,664	20.674
	X131	1	22,648	412,664	18.220
	X631	1	5,124	399,164	77.900
	X731	1	9,792	127,675	13.038
	X931	2	64,144	1,219,719	19.015
COMP. S/C GIRD.	X071	2	106,352	2,383,049	22.407
	X771	2	50,424	833,691	16.533
	X971	2	98,904	2,264,619	22.897
CONC. PRESTR. GIRD.	X081	2	18,209	241,474	13.261
	X281	5	67,993	797,888	11.734
	X481	2	36,012	416,661	11.570
	X781	5	70,182	900,338	12.828
	X981	1	12,628	235,105	18.617
		35	689,500	12,542,514	18.190

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1969

TABLE 6A

PRIMARY I SYSTEM

DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X020	2	3,060	150,103	49.053
STEEL-CONC. SLAB	X040	2	3,400	95,932	28.215
CONC. PRESTR. GIRD.	X081	3	16,412	226,761	13.816
	X181	1	10,120	132,261	13.069
		8	32,992	605,057	18.339

STATE HIGHWAY COMMISSION OF MONTANA
 PLANNING SURVEY SECTION
 SUMMARY OF STRUCTURES BY TYPE
 DURING CALENDAR YEAR 1969

TABLE 6C

SECONDARY SYSTEM

DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
CONC. SLAB	X020	1	930	50,488	54.288
CONC. PRESTR. GIRD.	X081	3	19,791	324,147	16.378
		4	20,721	374,635	18.079

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION
SUMMARY OF STRUCTURES BY TYPE
DURING CALENDAR YEAR 1969

TABLE 6D

ALL SYSTEMS

DECEMBER 31, 1970

BRIDGE TYPE	CODE	NO. OF STRUCTURES	SQ. FT. STRUCTURES	TOTAL COST	COST / SQ. FOOT
TIMB. GIRD.	X001	1	588	2,353	4.001
CONC. SLAB	X020	3	3,990	200,591	50.273
	X220	5	31,902	392,193	12.293
CONC. GIRD	X221	1	4,940	62,257	12.602
STEEL GIRD.	X031	2	89,658	1,853,664	20.674
	X131	1	22,648	412,664	18.220
	X631	1	5,124	399,164	77.900
	X731	1	9,792	127,675	13.038
	X931	2	64,144	1,219,719	19.015
STEEL-CONC. SLAB	X040	2	3,400	95,932	28.215
COMP. S/C GIRD.	X071	2	106,352	2,383,049	22.407
	X771	2	50,424	833,691	16.533
	X971	2	98,904	2,264,619	22.897
CONC. PRESTR. GIRD.	X081	8	54,412	792,382	14.562
	X181	1	10,120	132,261	13.069
	X281	5	67,993	797,888	11.734
	X481	2	36,012	416,661	11.570
	X781	5	70,182	900,338	12.828
	X981	1	12,628	235,105	18.617
		47	743,213	13,522,206	18.194

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1969

TABLE 7

DECEMBER 31, 1970

SYSTEM - INTERSTATE

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	.000		
0400-0499	.000		
0500-0999	24.389	\$ 6,968,232	\$ 285,712
1000-1499	5.397	\$ 1,997,921	\$ 370,191
1500-1999	22.432	\$ 6,220,890	\$ 277,322
2000-2999	32.854	\$ 15,139,832	\$ 460,821
3000-4999	.000		
5000-OVER	.000		
TOTAL	85.072	\$ 30,326,875	\$ 356,484

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1969

TABLE 7A
SYSTEM - PRIMARY I

DECEMBER 31, 1970

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	.000		
0100-0199	.000		
0200-0299	.000		
0300-0399	5.918	\$ 1,019,986	\$ 172,353
0400-0499	7.734	\$ 1,628,579	\$ 210,573
0500-0999	14.801	\$ 2,455,825	\$ 165,922
1000-1499	.000		
1500-1999	2.592	\$ 1,090,229	\$ 420,613
2000-2999	8.388	\$ 2,113,174	\$ 251,928
3000-4999	1.471	\$ 1,093,850	\$ 743,609
5000-OVER	4.650	\$ 2,937,971	\$ 631,821
TOTAL	45.554	\$ 12,339,614	\$ 270,878

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF ROADWAY MILEAGE AWARDED
BY AVERAGE DAILY TRAFFIC
(NEW OR RECONSTRUCTED ROADWAY ONLY)
DURING CALENDAR YEAR 1969

TABLE 7C

DECEMBER 31, 1970

SYSTEM - SECONDARY

AVERAGE DAILY TRAFFIC	MILEAGE	COST	COST PER MILE
0001-0049	.000		
0050-0099	43.386	\$ 3,304,357	\$ 76,161
0100-0199	26.221	\$ 2,422,034	\$ 92,370
0200-0299	.000		
0300-0399	3.920	\$ 560,753	\$ 143,049
0400-0499	.689	\$ 122,426	\$ 177,686
0500-0999	.000		
1000-1499	.217	\$ 58,706	\$ 270,534
1500-1999	.000		
2000-2999	.000		
3000-4999	.000		
5000-OVER	.000		
TOTAL	74.433	\$ 6,468,276	\$ 86,900

STATE HIGHWAY COMMISSION OF MONTANA
PLANNING SURVEY SECTION

SUMMARY OF CONTRACTED AND
NON-CONTRACTED COSTS BY SYSTEM
DURING CALENDAR YEAR 1969

TABLE 8

DECEMBER 31, 1970

SYSTEM	CONTRACTED COST	NON CONTRACTED COST	TOTAL
INTERSTATE	\$ 56,405,157	\$ 6,152,890	\$ 62,558,047
PRIMARY I	\$ 12,707,034	\$ 1,352,894	\$ 14,059,928
SECONDARY	\$ 7,047,282	\$ 760,222	\$ 7,807,504
TOTAL	\$ 76,159,473	\$ 8,266,006	\$ 84,425,479

